



Computing in Africa is Set to Get a Big Boost

The image of Africa as a technological laggard is set to be seriously challenged as a number of developments converge in 2007. Alongside the booming African mobile phone market - itself now getting global attention for innovation - the African computer scene will soon have both the software and hardware that acknowledge the continent's unique needs while being affordable. Further challenging stereotypes, the continent's burgeoning and dynamic open source software movement is the subject of a new film by a Danish filmmaker, and the African-made Ubuntu, Linux-based operating system now has a new user manual to help it attract new adherents.

African technological innovation rarely makes headlines in the West. But a Danish filmmaker is changing these perceptions with his film showing the dynamism and enthusiasm behind the open source software movement in Africa. The yet-untitled film, directed by David Madie, is from [Eighty Days Productions](#) and is due for release in the spring of 2007. It follows a young computer entrepreneur, Wire Lunghabo James, from Uganda's Linux Solutions in Africa, who has been instrumental in building the Web's presence in the country and in East Africa.

"This film will show the characters fighting for what they believe in. This happens to be Open Source, which I think is an important agenda," director Madie told [Tactical Technology Collective](#), a website "demystifying technology for non-profits."

Unlike off-the-shelf software, open source software has many advantages. It is free, and no licence fee is required, so as many copies as necessary can be made. It is fully customisable, so local languages and cultural conditions can be taken into consideration. It is a universal language (the most popular is Linux) and thus it is easier to understand how a specific application works. For developing countries, it has the advantage of empowering local programmers and demystifying computer programming, removing it from the domain of private companies and large government agencies. In 2005 the New Partnership for African Development (NEPAD) urged African countries to embrace open source software to encourage the growth of indigenous software development.

"I think he (James) is also a role model in the sense that he combines doing a business, with doing social work. To him these things are not opposites: these are things that can perfectly work well together. You can do business in a social manner," Madie said.

The Ubuntu software programme is a complete, free operating system that emphasizes community, support, and ease of use while refusing to compromise on speed, power, and flexibility. Ubuntu is an ancient African word meaning humanity to others, and its software version is described as Linux for human beings - designed for everyone from computer novices to experts. Ubuntu is the most in-demand Linux system in Africa, and the official guide is aimed at NGOs, home users or small businesses.

One Laptop Per Child Project (OLPC)

In another development, the One Laptop Per Child project (OLPC) has announced the release for general sale of its durable bright green and yellow laptops ready loaded with Linux-based operating systems. Customers in wealthy countries will have to buy two laptops, with the second going to a developing country. Five million will be delivered to

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the developing world over the summer of 2007. The eventual aim is to sell the machine to developing countries for US \$100, but the current cost of the machine is about US \$150. The OLPC laptop's software has been designed to work specifically in an educational context. It has built-in wireless networking and video conferencing so that groups of children can work together. The OLPC project is working with the search engine Google, who will act as "the glue to bind all these kids together". Google will also help the children publish their work on the internet.

The [One Laptop Per Child project](#) has struck its first deal with Rwanda's president Paul Kagame to provide every school pupil with a laptop computer within the next five years. The laptops and all the support costs will be covered by OLPC.

Resources

- Email contact: david@eightydays.dk
- The Free Software and Open Source Foundation (FOSSFA):
www.fossfa.net
- South African-based open source web portal:
<http://www.tectonic.co.za/>
- Open source in Africa web portal for NGOs:
www.opensourceafrica.org
- Ubuntu software user manual: <http://www.phptr.com>

Ring Tones and Mobile Phone Downloads are Generating Income for Local Musicians in Africa

African musicians hoping to support themselves through their recordings have always had to contend with the added burden of poor copyright control over their work. While musicians in the West are supported by a highly regulated regime of copyright protection - ensuring some to become the richest people in their respective countries - most African musicians have had to stand back and watch their work being copied, sold and exchanged with little chance of seeing any royalties. Global audiences know of the success of artists like Fela Kuti, Youssou N'Dour, Manu Dibango and Miriam Makeba, but most African musicians can look forward to scant earnings from recording their music.

Anyone who has walked through the markets of Africa will know there are plenty of pirated CDs for sale, yet it is of no use to a musician who never sees the money. Poverty is endemic amongst African musicians as a result of this loss of income. While music is a global business worth US \$40 billion according to the Recording Industry Association of America, pirated music in Africa is rampant - some estimates by the [Recording Industry of South Africa](#) put it at over 80 percent of available music. How much money is being lost can be judged from the estimated daily income of a pirate music vendor in Africa, ranging between Euro 762 and Euro 2,744.

But a solution to this problem is being pioneered in Botswana in southern Africa. A partnership between mobile phone provider [Orange Botswana](#) and Small House Records/Mud Hut Studios, ensures musicians get a slice of the profit pie. Managing director Solomon Monyame of Small House Records has signed a contract with Orange to share the profits from ring tone and song downloads to mobile phone subscribers. With more than 76.8 million people currently subscribing to mobile phone services in Africa, and the number growing by about 58 percent each year for the last five years, the potential royalties market for African musicians is vast if this initiative is replicated across the continent.

In the paper "Development Goes Wireless" to be published in the spring 2007 issue of the journal of the [Institute of Economic Affairs](#), lead researcher Karol Boudreaux of George Mason University's Mercatus Center and [Enterprise Africal](#), discovered mobile phones and mobile phone companies can give artists a new way to control royalties for their work. She found that in the absence of effective copyright control mechanisms - as is the case in many African countries - the mobile phone company can step in to save the day.

"When you walk through the markets there you see so much music available on the street, but there is little intellectual property rights protection," she said.

"In other countries, like the UK, you have strong intellectual property rights protection, but this just isn't the case in much of Africa. The mobile phones are a very good way to get around this problem as long as cell phone providers are willing to make the contracts. Botswana is very lucky in that they have a very good contract environment, but this isn't necessarily the case in other countries. It is a win-win for music providers and mobile companies."

The [NetTel@Africa](#) project started by USAID and the Center to Bridge the Digital Divide, in partnership with many African and US universities, is also championing copyright protection strategies.

How important creative industries are becoming to economic development is slowly being recognized. It is now seen as an important component of modern post-industrial, knowledge-based economies, but equally also a way for economically underdeveloped countries to generate wealth. Not only are they thought to account for higher than average growth and job creation, they are also vehicles of cultural identity and play an important role in fostering cultural diversity. Initiatives like [UNESCO's Global Alliance for Cultural Diversity](#) attempt to document this phenomenon and back it up with hard numbers.

UNESCO also has a project to establish musicians' cooperatives across Africa. As such, the musicians are able to pool their production resources, which are individually insufficient to ensure the economic viability of a small or medium-sized business. In Burkina Faso, a co-operative is working with the International Labour Organisation.

Festivals like Mali's annual [Festival in the Desert](#) in the oasis of Essakane, 65 kilometers from Timbuktu, is an example of how African musicians are finding their own way to reach audiences. Targeted above all to promote African and Malian Music inside the continent, the Festival has also boosted international tourism to the region and almost 10 percent of last year's 6,000 visitors came from outside of Africa.

Another initiative for African musicians is the DigiArts Africa network. It was founded by UNESCO and aims to increase communication between artists, industries and educators, make musicians self-sustainable, use the ICT industries to support and contribute to cultural activities, and better promote African musicians within and outside Africa.

Well-known Senegalese musician Thione Seck is blunt about the economic effect of piracy on his income.

"Were there no piracy, I could have bought an island, seeing the number of songs that I composed in more than 30 years of my career", he told a local newspaper.

According to Abdoul Aziz Dieng, president of the Senegal Music Works Association (AMS) and [Chairman of the Board of the Senegalese Copyright Office \(BSDA\)](#), out of 10 Senegalese artists' CDs available on the local market, "only two are legal". For audio cassettes, the ratio is three pirate copies out of every five sold.

Opportunities to combat piracy and generate income are also not limited to just musicians. Filmmakers in Africa are starting to learn how to exploit the opportunities thrown up by the fast-expanding mobile phone networks on the continent. Already a phenomenon in South Africa, director [Aryan Kaganof](#) is in the process of releasing SMS Sugar Man, a feature length movie shot entirely with mobile devices. The movie will be beamed to cell phones in three-minute clips over 30 days.

What are the effects of Piracy?

- *Artist*

No royalty payments, no money to live

- *Record companies*

No return on investments. Staff retrenchments

- *Retailers*

Cannot compete with low prices. Staff retrenchments

- *Consumers*

Many copies are of inferior quality. If tracks are missing or the sound quality is poor, no exchange or refunds. May be contributing to "organized crime" syndicates which are heavily involved in international music piracy

Source: Recording Industry of South Africa

LINKS:

- Lively website about African musicians: www.africanmusiciansprofiles.com
 - BBC website on African music: [Africa on your street](#)
- Further reading from UNESCO: [African music: new challenges, new vocations](#)

Carbon Credits can Benefit African Farmers Thanks to New System

The global carbon credit trading schemes emanating from the Kyoto Protocol are now creating a multi-billion dollar market - the European carbon market was worth €14.6 billion in 2006 - and represents one of the fastest growing business opportunities in the world. Being green has finally come of age. Yet all the benefits of this are largely bypassing Africa despite more than 70 percent of the continent's inhabitants earning a living off the land.

The [World Agroforestry Centre](#) - whose mission is to advance the science and practice of agroforestry to transform the lives and landscapes of the rural poor in developing countries - in partnership with Michigan State University has developed a method using satellite imagery and infrared sensing that measures carbon storage in African farmland. They have completed a pilot programme in western Kenya and are ready to encourage poor farmers to plant trees as soon as the European Union allows carbon credits under the Kyoto Protocol to be awarded for this kind of scheme. Further pilot projects will be rolled out in 2007 in partnership with [CARE International](#) and the [WWF](#).

But European Union policies on carbon credits are holding back this significant opportunity to enhance African livelihoods. [Europe's Emissions Trading Scheme \(ETS\)](#) is at present not willing to recognize the new method of verifying carbon storage in farmland. The ETS is the largest multi-country, multi-sector greenhouse gas emission trading scheme in the world. The issue of carbon storage, or carbon "sinks" as they are known, is very controversial in the world of Kyoto agreement implementation. Non-government organizations that advocate for forests and indigenous people have worked hard to exclude the use of forestry credits to offset fossil fuel burning, arguing that forestry offsets to date have been for big monoculture plantations of fast-growing eucalyptus or pine trees. It is claimed they are net carbon emitters over their lifetimes and also cause additional environmental and social problems.

But the World Agroforestry Centre's approach is very different from a monoculture plantation. Their scheme is to help rural Africans to integrate more trees into their agricultural production systems, with benefits besides storing carbon. They argue that the right kinds of trees can increase the productivity and resilience of the land. Trees provide food, fuel, fertilizer, and medicine - medicinal trees are the main source of medication for 80 percent of Africa's population.

Louis Verchon, the lead scientist for climate change at the World Agroforestry Centre, believes that if the EU would put in place a new scheme to credit farmers who capture carbon in their land, "millions of dollars in carbon credits could begin flowing to the world's rural poor." At present, Verchon says two-thirds of the carbon credit business is being captured by Asian countries who are mostly offering industrial solutions. "Africa has something to offer on this - it can't compete with the likes of South Korea on industrial solutions, but it has plenty of land."

In order to make the scheme work, two things will need to be improved: Africa's institutional weakness and the paucity of qualified carbon credit verifiers. A network of verifiers would be required to inspect farm sites and make the calculations required to allocate carbon credits to poor farmers. At present, there are no qualified African-born verifiers in Africa according to Verchon.

The WAC are working with WWF and CARE to build up NGO capacity and start demonstration projects to prove it can work - two pilot projects are already up and running in Kenya. They are also automating much of the process by building a web portal.

Verchon says the WAC "are in it for the long-haul and we will see this grow over the next ten years."

More on emissions trading: [European Union Emission Trading Scheme](#)

[Kenya's Greenbelt Movement](#): Founded by Nobel Peace Prize winner Wangari Maathai, it provides income and sustenance to millions of people in Kenya through the planting of trees.

New Battery Back-up Technology Targeting Developing Countries and Remote Regions

Africa's greater global engagement and economic growth in the past few years has started to draw attention back towards the continent's dearth of reliable power sources and inadequate power infrastructure. While demand grows at a fast pace, sadly political instability and lack of security in many countries scares off foreign investors and multinational companies who could help to expand capacity. This leaves people running small enterprises and organisations - especially in rural areas - significantly neglected. According to Zandile Mjoli, senior general manager for resources and strategy at South African utility Eskom, two-thirds of Africa's 700 million people live in rural areas, and less than 10 per cent of the rural population has access to electricity. Each one per cent increase in available power will increase GDP by an estimated two to three per cent.

The extent of the looming crisis in 2007 can be seen in the problems of the [Southern African Power Pool](#), which coordinates power production and trade in the Southern African Development Community (SADC). It predicts an energy shortfall in 2007 that will force countries like South Africa and Mozambique, which have provided about 40 percent of Zimbabwe's power requirements for example, to scale down on exports in order to meet rising demand from their own domestic markets.

Plug Power is a research and development company in the US specializing in clean, reliable energy products for areas where power supply is unreliable or non-existent. It uses fuel cell technology to build back-up power supplies for telecommunications, utilities and uninterruptible power supply needs like refrigerators and medical supplies. It is now targeting Africa with its new GenCore back-up fuel cell system using ultra capacitor technology, basically the mechanism by which the fuel cell stores electricity. It is specifically built for remote regions with severe climates where the limited lifespan of a battery and harsh weather conditions can lead to power supply disruptions.

Fuel cells use chemicals to create electricity and heat similar to batteries, but when hydrogen is used, they only produce clean water as a by-product. Most importantly for those working in development, it provides a continuous power supply as long as the fuel is provided. Plug Power's system allows for hydrogen to be taken from multiple sources to power the cells.

Website: <http://www.plugpower.com/>



Landmark Study Finds Simple Toys Key to Boosting Educational Development and Meeting MDGs

African youth need to play more according to a new landmark study published in the UK's leading medical journal, [The Lancet](#). The study tackles the high rates of illiteracy and educational under-achievement in Africa and finds that malnourishment and lack of stimulation are leaving millions unable to benefit from schooling. It found projects that encouraged learning through play led to children boosting their IQs and getting better reading skills. And it comes up with a very simple and low-cost solution - but excellent opportunity for entrepreneurs - toys and play.

"These are not high tech interventions," said team leader for the study, Professor Sally McGregor of the Institute of Child Health of University College London. "Research over decades in Jamaica (and other countries) has shown that women with only primary school-level education and a few home made toys can be trained to make a significant difference in the education, intelligence and mental health of disadvantaged children. The Millennium Goal of universal primary education for all cannot be met unless these children's poor development is tackled."

The paper - Strategies to Avoid the Loss of Developmental Potential among Over 200 Million Children in the Developing World - is published in three parts in the journal.

Twenty projects around the world were evaluated for the benefits they produce for children under five who use toys. McGregor, who has set up several projects in Kenya, Tanzania and Uganda designing and constructing toys using whatever materials are available, was appalled by the widespread neglect of play throughout these countries. With play, the study found children read better, have better mental health and better self-esteem. In Africa it is 'desperate, really desperate' she says.

African primary school enrolments and literacy rates are among the lowest in the world, with over 42 million school children in sub-Saharan Africa not enrolled in school, and many children not able to afford to go or stay in primary school. Today a little more than half of African adults are literate and some 60 per cent of children go to school, according to UNESCO. The agency has forecasted the need for an additional 1.6 million teachers in Sub-Saharan African classrooms by 2015 - an increase of 68 percent.

The materials used to construct the toys do not need to be expensive or sophisticated. Toys can be constructed from banana trees, mud, corn on the cob, old plastic bottles, or cloth and straw dolls. It is key that the toys are safe for children under five and that anyone building such toys for sale must follow

existing manuals.

McGregor continues: 'One mother in a village was doing marvellous things with tiny scraps of material to make a doll. She received no recognition in the village for the work she was doing yet it was so important. It doesn't take much - dolls or simple wooden blocks - they are so versatile. You see schools with nothing - it is unforgivable. The problem is how poor these people are - food just takes priority over toys - it is that stark.'

Locally produced toys are key to resolving this crisis for several reasons. Cost is the most important, with those most adversely affected also the least able to pay for toys and who are already living a precarious existence where basic survival takes precedence over play. Another factor is Africa being home to the countries who import the least number of toys: Somalia, Liberia, Togo, Rwanda and Chad. But the situation for African toymakers is often desperate as well, with many craft workers living at the economic margins. Several initiatives have emerged in the last couple of years to address this problem and ensure African toys are local and toymakers earn a living.

Initiatives like the [African Toyshop](#) based in Johannesburg, South Africa - a fair trade business - work to ensure African toymakers can make a living and get their wares to as wide a market as possible. The toymakers featured all use natural resources or recycled materials. Most work at the village level and produce toys that are culturally relevant to Africa. The organization COFTA - [Cooperation For Fair Trade in Africa](#) - is a network of Fair Trade producer Organizations in Africa involved and working with disadvantaged grassroots producers to eliminate poverty through fair trade. It is an excellent resource for grassroots organizations wanting to work with African toymakers.

Resources:

- The UK charity [TALC - Teaching-aids At Low Cost](#) - is planning to make available toy making manuals on a CD. Tel: (0) 1727 853869
- This website also has excellent resources for budding toy and play area makers in Africa: [iafrica.com](#)
 - Online exhibition of African toys: [www.africancraft.com](#)
- Book: Africa on the Move: Toys from West Africa Stefan Eisenhofer, Karin Guggeis, Jacques Froidevaux Stuttgart, Germany: Arnoldsche, 2004. 216 pp., 195 color, 28 b/w illustrations. \$75.00, cloth.



■ New Publication with key focus on financing for development

The 2006 edition of the Economic Report on Africa: Capital Flows and Development Financing in Africa places capital flows at the centre of the debate on development financing and examines how external capital can help countries accelerate growth and reduce poverty.

Website: www.uneca.org

■ African Development: Making Sense of the Issues and Actors

by Todd J. Moss, Lynne Rienner Publishers (February 2007)

Website: www.amazon.com

■ The Official Ubuntu Book

by Benjamin Mako Hill, Jono Bacon, Corey Burger, Jonathan Jesse and Ivan Krstic

Ubuntu is a complete, free operating system that emphasizes community, support, and ease of use while refusing to compromise on speed, power, and flexibility. It's Linux for human beings-designed for everyone from computer novices to experts.

Website: www.amazon.com

Job Opportunities

■ [Africa Recruit Job Compendium](#)

■ [Africa Union](#)

■ [CARE](#)

■ [Christian Children's Fund](#)

■ [ECOWAS](#)

■ [International Crisis Group](#)

■ [International Medical Corps](#)

■ [International Rescue Committee](#)

■ [Internews](#)

■ [IREX](#)

■ [Organization for International Migration](#)

■ [Oxfam](#)

■ [Relief Web Job Compendium \(UN OCHA\) \(1\)](#)

■ [Relief Web Job Compendium \(UN OCHA\) \(2\)](#)

■ [Save the Children](#)

■ [The Development Executive Group job compendium](#)

■ [Trust Africa](#)

■ [UN Jobs](#)

■ [UNDP](#)

■ [UNESCO](#)

■ [UNICEF](#)

■ [World Bank](#)

■ [World Wildlife Fund \(Cameroon\)](#)



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